```
EEEEEEEEEEEEEEEE  DDDDDDDDDD      TTTTTTTTTTTTTTTT
EEEEEEEEEEEEEEEEE  DDDDDDDDDD      TTTTTTTTTTTTTTTT
EEEEEEEEEEEEEEEEE  DDDDDDDDDD      TTTTTTTTTTTTTTTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEEEEEEEEEE      DDD      DDD            TTT
EEEEEEEEEEE      DDD      DDD            TTT
EEEEEEEEEEE      DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEE              DDD      DDD            TTT
EEEEEEEEEEEEEEEE  DDDDDDDDDD            TTT
EEEEEEEEEEEEEEEE  DDDDDDDDDD            TTT
EEEEEEEEEEEEEEEE  DDDDDDDDDD            TTT
```

FILEID**CHMINSCHR

CHMINSCHR.....

LIS

```
    1    0001   0   %TITLE 'EDT$CHMINSCHR - insert a string of characters'
    2    0002   0   MODULE EDT$CHMINSCHR (                              ! Insert a string of characters
    3    0003   0                        IDENT = 'V04-000'              ! File: CHMINSCHR.BLI Edit: JBS1010
    4    0004   0                        ) =
    5    0005   1   BEGIN
    6    0006   1
    7    0007   1   !****************************************************************************
    8    0008   1   !*                                                                          *
    9    0009   1   !*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                *
   10    0010   1   !*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                 *
   11    0011   1   !*   ALL RIGHTS RESERVED.                                                   *
   12    0012   1   !*                                                                          *
   13    0013   1   !*   THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED  *
   14    0014   1   !*   ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
   15    0015   1   !*   INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER  *
   16    0016   1   !*   COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
   17    0017   1   !*   OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
   18    0018   1   !*   TRANSFERRED.                                                           *
   19    0019   1   !*                                                                          *
   20    0020   1   !*   THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
   21    0021   1   !*   AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
   22    0022   1   !*   CORPORATION.                                                           *
   23    0023   1   !*                                                                          *
   24    0024   1   !*   DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
   25    0025   1   !*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                *
   26    0026   1   !*                                                                          *
   27    0027   1   !*                                                                          *
   28    0028   1   !****************************************************************************
   29    0029   1   !
   30    0030   1
   31    0031   1   !++
   32    0032   1   ! FACILITY:      The DEC Standard Editor
   33    0033   1   !
   34    0034   1   ! ABSTRACT:
   35    0035   1   !
   36    0036   1   !       This module does a (change mode) insertion of a string of
   37    0037   1   !       characters at the current position in the text.
   38    0038   1   !
   39    0039   1   ! ENVIRONMENT:  Runs at any access mode - AST reentrant
   40    0040   1   !
   41    0041   1   ! AUTHOR: Bob Kushlis, CREATION DATE: Unknown
   42    0042   1   !
   43    0043   1   ! MODIFIED BY:
   44    0044   1   !
   45    0045   1   ! 1-001 - Original.  DJS 04-Feb-1981.  This module was created by
   46    0046   1   !         extracting the routine INSERT_CHARS from the module CHANGE.BLI.
   47    0047   1   ! 1-002 - Regularize headers.  JBS 02-Mar-1981
   48    0048   1   ! 1-003 - Change SPLIT_LINE to EDT$$SPLT_LNINS .  JBS 30-Mar-1981
   49    0049   1   ! 1-004 - Fix up some comments.  JBS 02-Jun-1981
   50    0050   1   ! 1-005 - Use new message codes.  JBS 04-Aug-1981
   51    0051   1   ! 1-006 - New screen update logic.  JBS 13-Sep-1982
   52    0052   1   ! 1-007 - Replace call to edt$$tst_eob. STS 22-Sep-1982
   53    0053   1   ! 1-008 - Add a parameter to the split line routine.  SMB 16-Nov-1982
   54    0054   1   ! 1-009 - Change the parameter to split line routine.  SMB 17-Nov-1982
   55    0055   1   ! 1-010 - Change the call to EDT$$MRK_LNCHG.  JBS 27-Dec-1982
   56    0056   1   !--
   57    0057   1
```

```
   59        0058  1  %SBTTL 'Declarations'
   60        0059  1  !
   61        0060  1  ! TABLE OF CONTENTS:
   62        0061  1  !
   63        0062  1
   64        0063  1  REQUIRE 'EDTSRC:TRAROUNAM';
   65        0502  1
   66        0503  1  FORWARD ROUTINE
   67        0504  1      EDT$$INS_STR;                                           ! Insert a string of characters at the current position
   68        0505  1
   69        0506  1  !
   70        0507  1  ! INCLUDE FILES:
   71        0508  1  !
   72        0509  1
   73        0510  1  REQUIRE 'EDTSRC:EDTREQ';
   74        0645  1
   75        0646  1  !
   76        0647  1  ! MACROS:
   77        0648  1  !
   78        0649  1  !     NONE
   79        0650  1  !
   80        0651  1  ! EQUATED SYMBOLS:
   81        0652  1  !
   82        0653  1  !     NONE
   83        0654  1  !
   84        0655  1  ! OWN STORAGE:
   85        0656  1  !
   86        0657  1  !     NONE
   87        0658  1  !
   88        0659  1  ! EXTERNAL REFERENCES:
   89        0660  1  !
   90        0661  1  !     In the routine
```

K 14

EDT$CHMINSCHR   EDT$CHMINSCHR - insert a string of characters   16-Sep-1984 00:01:27   VAX-11 Bliss-32 V4.0-742   Page 3
V04-000   EDT$$INS_STR - insert a string of characters   14-Sep-1984 12:22:36   [EDT.SRC]CHMINSCHR.BLI;1   (3)

```
  92   0662  1  %SBTTL 'EDT$$INS_STR  - insert a string of characters'
  93   0663  1
  94   0664  1  GLOBAL ROUTINE EDT$$INS_STR (                              ! Insert a string of characters
  95   0665  1      S,                                                     ! Address of string to insert
  96   0666  1      L                                                      ! Length of string to insert
  97   0667  1      ) =
  98   0668  1
  99   0669  1  !++
 100   0670  1   FUNCTIONAL DESCRIPTION:
 101   0671  1
 102   0672  1       Insert a string of characters at the current position in the text.
 103   0673  1
 104   0674  1   FORMAL PARAMETERS:
 105   0675  1
 106   0676  1   S                           a pointer to the string
 107   0677  1   L                           the length of the string
 108   0678  1
 109   0679  1   IMPLICIT INPUTS:
 110   0680  1
 111   0681  1       EDT$$A_SEL_POS
 112   0682  1       EDT$$A_LN_END
 113   0683  1       EDT$$G_LN_LEN
 114   0684  1       EDT$$A_LN_PTR
 115   0685  1       EDT$$T_LN_BUF
 116   0686  1
 117   0687  1   IMPLICIT OUTPUTS:
 118   0688  1
 119   0689  1       EDT$$A_SEL_POS
 120   0690  1       EDT$$A_LN_PTR
 121   0691  1
 122   0692  1   ROUTINE VALUE:
 123   0693  1
 124   0694  1       1 = success, 0 = error (line overflow)
 125   0695  1
 126   0696  1   SIDE EFFECTS:
 127   0697  1
 128   0698  1       NONE
 129   0699  1
 130   0700  1  !--
 131   0701  1
 132   0702  2      BEGIN
 133   0703  2
 134   0704  2      EXTERNAL ROUTINE
 135   0705  2          EDT$$MSG_BELL : NOVALUE,          ! Output a message to the terminal with a warning bell
 136   0706  2          EDT$$MRK_LNCHG : NOVALUE,         ! Track line updates
 137   0707  2          EDT$$CS_OP,                       ! Move up a line
 138   0708  2          EDT$$UPD_LNLEN : NOVALUE,         ! Update the length of the current line
 139   0709  2          EDT$$SEL_RNGPOS,                  ! Compare the select line with the current line
 140   0710  2          EDT$$SPLT_LNINS : NOVALUE;        ! Split a line of text at the current cursor position
 141   0711  2
 142   0712  2      EXTERNAL
 143   0713  2          EDT$$A_SEL_POS,                   ! select position.
 144   0714  2          EDT$$A_LN_END,                    ! End of current line pointer
 145   0715  2          EDT$$G_LN_LEN,                    ! Length of current line
 146   0716  2          EDT$$A_WK_LN : REF LIN_BLOCK,
 147   0717  2          EDT$$Z_EOB_LN,
 148   0718  2          EDT$$A_LN_PTR,                    ! Current character pointer
```

L 14

EDT$CHMINSCHR   EDT$CHMINSCHR - insert a string of characters   16-Sep-1984 00:01:27   VAX-11 Bliss-32 V4.0-742   Page 4
V04-000   EDT$$INS_STR - insert a string of characters   14-Sep-1984 12:22:36   [EDT.SRC]CHMINSCHR.BLI;1   (3)

```
149    0719  2                EDT$$T_LN_BUF;                              ! Line buffer
150    0720  2
151    0721  2           MESSAGES ((LINEXC255));
152    0722  2       !+
153    0723  2       ! First make sure the line will not overflow.
154    0724  2       !-
155    0725  2
156    0726  2           IF (.EDT$$G_LN_LEN + .L GTRU 255)
157    0727  2           THEN
158    0728  2               BEGIN
159    0729  2               EDT$$MSG_BELL (EDT$_LINEXC255);
160    0730  2               RETURN (0);
161    0731  2               END
162    0732  2           ELSE
163    0733  3               BEGIN
164    0734  3
165    0735  3               LOCAL
166    0736  3                   OLD_LPOINT;
167    0737  3
168    0738  3       !+
169    0739  3       ! Check for the old EOB.
170    0740  3       !-
171    0741  3
172    0742  4               IF (.EDT$$A_WK_LN EQLA EDT$$Z_EOB_LN)
173    0743  3               THEN
174    0744  4                   BEGIN
175    0745  4                   EDT$$SPLT_LNINS (0);               ! Don't use optimizer
176    0746  4                   EDT$$CS_UP ();
177    0747  4                   END;
178    0748  3
179    0749  3       !+
180    0750  3       ! Compute the new cursor position.
181    0751  3       !-
182    0752  3               OLD_LPOINT = .EDT$$A_LN_PTR;
183    0753  3               EDT$$A_LN_PTR = CH$PLUS (.EDT$$A_LN_PTR, .L);
184    0754  3       !+
185    0755  3       ! Open up a hole for the new characters.
186    0756  3       !-
187    0757  3               EDT$$CPY_MEM (CH$DIFF (.EDT$$A_LN_END, .OLD_LPOINT), .OLD_LPOINT, .EDT$$A_LN_PTR);
188    0758  3       !+
189    0759  3       ! And move them in.
190    0760  3       !-
191    0761  3               EDT$$CPY_MEM (.L, .S, .OLD_LPOINT);
192    0762  3       !+
193    0763  3       ! Update the length of the line.
194    0764  3       !-
195    0765  3               EDT$$UPD_LNLEN (.L);
196    0766  3       !+
197    0767  3       ! Record the insertion for the screen updater.
198    0768  3       !-
199    0769  3               EDT$$MRK_LNCHG (SCR_EDIT_MODIFY, .OLD_LPOINT - EDT$$T_LN_BUF);
200    0770  3       !+
201    0771  3       ! Update select range if necessary.
202    0772  3       !-
203    0773  3
204    0774  4               IF (EDT$$SEL_RNGPOS () EQL 0)
205    0775  3               THEN
```

```
                                                 M 14
EDTSCHMINSCHR      EDTSCHMINSCHR - insert a string of characters   16-Sep-1984 00:01:27   VAX-11 Bliss-32 V4.0-742        Page  5
V04-000            EDTSSINS_STR  - insert a string of characters   14-Sep-1984 12:22:36   [EDT.SRC]CHMINSCHR.BLI;1            (3)
```

```
: 206    0776  3  !+
: 207    0777  3  ! The current line is the select line.
: 208    0778  3  !-
: 209    0779  3
: 210    0780  3          IF CH$PTR_LSS (.OLD_LPOINT, .EDT$$A_SEL_POS) THEN EDT$$A_SEL_POS = CH$PLUS (.EDT$$A_SEL_POS, .L)
: 211    0781  3
: 212    0782  3      RETURN (1);
: 213    0783  2      END;
: 214    0784  2
: 215    0785  1   END;                                              ! of routine EDT$$INS_STR


                                                           .TITLE   EDTSCHMINSCHR EDTSCHMINSCHR - insert a string o
                                                                         f characters
                                                           .IDENT   \V04-000\

                                                           .EXTRN   EDT$$MSG_BELL, EDT$$MRK_LNCHG
                                                           .EXTRN   EDT$$CS_OP, EDT$$UPD_LNLEN
                                                           .EXTRN   EDT$$SEL_RNGPOS
                                                           .EXTRN   EDT$$SPLT_LNINS
                                                           .EXTRN   EDT$$A_SEL_POS, EDT$$A_LN_END
                                                           .EXTRN   EDT$$G_LN_LEN, EDT$$A_WK_LN
                                                           .EXTRN   EDT$$Z_EOB_LN, EDT$$A_LN_PTR
                                                           .EXTRN   EDT$$T_LN_BUF, EDT$_LINEXC255

                                                           .PSECT   _EDT$CODE,NOWRT, SHR, PIC,2

                                  03FC 00000               .ENTRY   EDT$$INS_STR, Save R2,R3,R4,R5,R6,R7,R8,R9   : 0664
                59 00000000G  00  9E  00002                MOVAB    EDT$$A_SEL_POS, R9
                58 00000000G  00  9E  00009                MOVAB    EDT$$A_LN_PTR, R8
                57        08  AC  D0  00010                MOVL     L, R7                                        : 0726
50 00000000G    00        57  C1  00014                    ADDL3    R7, EDT$$G_LN_LEN, R0
   000000FF     8F        50  D1  0001C                    CMPL     R0, #255
                          10  1B  00023                    BLEQU    1$
                00000000G  8F  DD  00025                    PUSHL    #EDT$_LINEXC255                             : 0729
   00000000G    00        01  FB  0002B                    CALLS    #1, EDT$$MSG_BELL
                          50  D4  00032                    CLRL     R0                                          : 0733
                          04  00034                        RET
                50 00000000G  00  9E  00035  1$:           MOVAB    EDT$$Z_EOB_LN, R0                           : 0742
                50 00000000G  00  D1  0003C                CMPL     EDT$$A_WK_LN, R0
                          10  12  00043                    BNEQ     2$
                          7E  D4  00045                    CLRL     -(SP)                                       : 0745
   00000000G    00        01  FB  00047                    CALLS    #1, EDT$$SPLT_LNINS
   00000000G    00        00  FB  0004E                    CALLS    #0, EDT$$CS_OP                              : 0746
                          56  68  D0  00055  2$:           MOVL     EDT$$A_LN_PTR, OLD_LPOINT                   : 0752
                          68  57  C0  00058                ADDL2    R7, EDT$$A_LN_PTR                           : 0753
51 00000000G    00        56  C3  0005B                    SUBL3    OLD_LPOINT, EDT$$A_LN_END, R1              : 0757
                          50  68  D0  00063                MOVL     EDT$$A_LN_PTR, R0
60              66        51  28  00066                    MOVC3    R1, (OLD_LPOINT), (R0)
66        04    BC        57  28  0006A                    MOVC3    R7, as, (OLD_LPOINT)                        : 0761
                          57  DD  0006F                    PUSHL    R7                                          : 0765
   00000000G    00        01  FB  00071                    CALLS    #1, EDT$$UPD_LNLEN
                50 00000000G  00  9E  00078                MOVAB    EDT$$T_LN_BUF, R0                           : 0769
7E              56        50  C3  0007F                    SUBL3    R0, OLD_LPOINT, -(SP)
                          01  DD  00083                    PUSHL    #1
   00000000G    00        02  FB  00085                    CALLS    #2, EDT$$MRK_LNCHG
   00000000G    00        00  FB  0008C                    CALLS    #0, EDT$$SEL_RNGPOS                         : 0774
```

EDT$CHMINSCHR   EDT$CHMINSCHR - insert a string of characters   16-Sep-1984 00:01:27   VAX-11 Bliss-32 V4.0-742   Page 6
V04-000   EDT$$INS_STR - insert a string of characters   14-Sep-1984 12:22:36   [EDT.SRC]CHMINSCHR.BLI;1   (3)

```
                                     50  D5 00093          TSTL     R0
                                     08  12 00095          BNEQ     3$
                          69         56  D1 00097          CMPL     OLD_LPOINT, EDT$$A_SEL_POS         0780
                                     03  1E 0009A          BGEQU    3$
                          69         57  C0 0009C          ADDL2    R7, EDT$$A_SEL_POS
                          50         01  D0 0009F 3$:      MOVL     #1, R0                             0782
                                     04  000A2             RET                                        0785
```

; Routine Size: 163 bytes,   Routine Base: _EDT$CODE + 0000

```
;  216          0786 1
;  217          0787 1 !<BLF/PAGE>
```

```
; 219        0788 1 END                                              ! of module EDT$CHMINSCHR
; 220        0789 1
; 221        0790 0 ELUDOM
```

                                    PSECT SUMMARY

        Name   Bytes   Attributes

; _EDT$CODE   163 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

                                Library Statistics

                                    -------- Symbols --------   Pages   Processing
        File   Total   Loaded   Percent   Mapped   Time

; _255DUA28:[EDT.SRC]EDT.L32;1   377   11   2   40   00:00.2
; _255DUA28:[EDT.SRC]PSECTS.L32;1   2   1   50   7   00:00.1

                                COMMAND QUALIFIERS

;   BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACEBACK/LIS=LIS$:CHMINSCHR/OBJ=OBJ$:CHMINSCHR MSRC$:CHMINSCHR.BLI/UPDATE=(ENH$:C
;   HMINSCHR)

; Size: 163 code + 0 data bytes
; Run Time: 00:12.4
; Elapsed Time: 00:14.3
; Lines/CPU Min: 3816
; Lexemes/CPU-Min: 11314
; Memory Used: 81 pages
; Compilation Complete

CHMFINENT
LIS

CHMINIT
LIS

CHMGCOUNT
LIS

CHMGINSTR
LIS

CHMGSUSTR
LIS

CHMINSMOD
LIS

CHMEMESS
LIS

CHMINSTAB
LIS

CHMENTTRM
LIS

CHMGBUF
LIS

CHMINSCHR
LIS

CHMINDATE
LIS

CHMEXVERB
LIS

CHMFINSTR
LIS

CHMGDIR
LIS

CHMGQUSTR
LIS

CHMHLPKPD
LIS

CHMINSSTR
LIS

CHMKEYWRD
LIS

CHMENDWRD
LIS

CHMEXCOM
LIS